



Amendments to the Claims:

Please amend the pending claims as follows:

Claims 1.-15 (previously cancelled)

16. (Currently Amended) A thin flange for use with a vacuum system, comprising:

a single, thin, generally circular member having in an inner diameter, an outer diameter, a first face having a sealing surface and an opposed, substantially parallel second face having a sealing surface, and a first plurality and a second plurality of bolt holes, the first plurality of bolt holes arranged in a circular pattern having a first diameter and extend from the first face to the second face, the second plurality of bolt holes arranged in a circular pattern having a second and different diameter and extend from the first face to the second face;

an inner web formed substantially within a circumference of the inner diameter; and

a knife edge along the first face sealing surface and the second face sealing surface, whereby a compressing force applied to the knife edges will engage the inner web with at least one soft metal member located therein.

17. (Currently Amended) The thin flange of claim 46 18, wherein the first plurality of bolt holes are configured to be aligned with a first standard bolt hole located on a first standard thickness flange and a second standard bolt hole located on a second standard thickness flange so that a bolt may extend through the first standard bolt hole, through the thin flange, and through the second standard bolt hole.

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18. (Currently Amended) The thin flange of claim 16 further comprising a first plurality and a second plurality of bolt holes, the first plurality of bolt holes arranged in a circular pattern having a first diameter and extending from the first face to the second face, the second plurality of bolt holes arranged in a circular pattern having a second and different diameter and extending from the first face to the second face, ~~wherein the first face sealing surface and the second face sealing surface comprise a knife edge.~~

19. (Currently Amended) The thin flange of claim ~~16~~ 18, wherein the second plurality of holes comprises threaded bores.

20. (Previously Presented) The thin flange of claim 16, further comprising at least one feed-through.

21. (Previously Presented) The thin flange of claim 16, wherein the thin flange contains at least one mounting feature.

22. (Previously Presented) The thin flange of claim 21, wherein the at least one mounting feature comprises at least one threaded bore.

23. (Currently Amended) The thin flange of claim ~~24~~ 16, wherein ~~at least one mounting feature~~ the inner web comprises at least one groove formed ~~on an inner surface of the thin flange~~ substantially within a circumference of the inner diameter.

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24. (Currently Amended) A vacuum component mounting system, comprising:

a first flange having a first flange sealing surface and a first plurality of bolt holes extending therethrough, the bolt holes disposed in a first generally circular pattern,

a second flange having a first second flange sealing surface and a second plurality of bolt holes extending therethrough, the bolt holes disposed in the first generally circular pattern; and

a single thin flange disposed between the first flange and the second flange, the thin flange comprising a generally circular member having in inner diameter, an outer diameter, a first face having a thin flange first sealing surface and an opposed, substantially parallel second face having a thin flange second sealing surface;

an inner web formed substantially within a circumference of the inner diameter;

a knife edge along the first face sealing surface and the second face sealing surface whereby a compressing force applied by the first flange and the second flange to the knife edges will engage the inner web with at least one soft metal member located therein; and

a third plurality ~~and a fourth plurality~~ of bolt holes extend from the first face to the second face, the third plurality of bolt holes arranged in the first generally circular pattern, ~~and the fourth plurality of bolt holes arranged in a second generally circular pattern having a second and smaller diameter~~ and extend from the first face to the second face.

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25. (Previously Presented) The vacuum component mounting system of claim 24, wherein the first, second and third plurality of bolt holes are aligned so that a bolt may extend through the first flange, the thin flange, and the second flange.

26. (Previously Presented) The vacuum component mounting system of claim 24, wherein the thin flange first and second sealing surfaces are configured to interact with the first flange sealing surface and the second flange sealing surface respectively to form a vacuum tight seal.

27. (Currently Amended) The vacuum component mounting system of claim 24, ~~wherein the first thin flanges sealing surface and the second thin flanges sealing surface comprise a knife edge~~ further comprising a fourth plurality of bolt holes extending from the first face to the second face, the fourth plurality of bolt holes arranged in a second generally circular pattern, having a second and smaller diameter than the first generally circular pattern, and extending from the first face to the second face.

28. (Currently Amended) The vacuum component mounting system of claim 24 27, wherein the fourth plurality of holes comprises threaded bores.

29. (Previously Presented) The vacuum component mounting system of claim 24, wherein the thin flange further comprising at least one feed-through.

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30. (Previously Presented) The vacuum component mounting system of claim 24, wherein the thin flange contains at least one mounting feature.

31. (Previously Presented) The vacuum component mounting system of claim 30, wherein the at least one mounting feature comprises at least one threaded bore.

32. (Currently Amended) The vacuum component mounting system of claim 30, wherein ~~the at least one mounting feature~~ the inner web comprises at least one groove formed ~~on an inner surface of the thin flange~~ substantially within a circumference of the inner diameter.

33. (Currently Amended) A thin flange for use with a vacuum system, comprising:

a single flange member having a first face having a sealing surface and an opposed, substantially parallel second face having a sealing surface, and ~~a first plurality and a second plurality of bolt holes, the first plurality of bolt holes arranged in a circular pattern having a first diameter and extend from the first face to the second face, the second plurality of bolt holes disposed inside the circular pattern of the first plurality of holes and extend from the first face to the second face;~~

an inner web formed substantially within a circumference of an inner diameter of the flange member whereby a compressing force applied to the first and second surfaces of the flange member will engage the inner web with at least one gasket located within the web.

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34. (Currently Amended) The thin flange of claim 33 35, wherein the first plurality of bolt holes are configured to be aligned with a first standard bolt hole located on a first standard thickness flange and a second standard bolt hole located on a second standard thickness flange so that a bolt may extend through the first standard bolt hole, through the thin flange, and through the second standard bolt hole.

35. (Currently Amended) The thin flange of claim 33, ~~wherein the first face sealing surface and the second face sealing surface comprise a knife edge~~ further comprising a first plurality and a second plurality of bolt holes, the first plurality of bolt holes arranged in a circular pattern having a first diameter and extending from the first face to the second face, the second plurality of bolt holes disposed inside the circular pattern of the first plurality of holes and extending from the first face to the second face.

36. (Previously Presented) The thin flange of claim 33, further comprising at least one feed-through.

37. (Previously Presented) The thin flange of claim 33, wherein the thin flange contains at least one mounting feature.

38. (Previously Presented) The thin flange of claim 37, wherein the at least one mounting feature comprises at least one threaded bore.

39. (Currently Amended) The thin flange of claim 37, wherein ~~at least one mounting feature~~ the inner web comprises at least one groove formed ~~on an inner surface of the thin flange~~ substantially within a circumference of the inner diameter.

40. (New) A method of vacuum sealing, said method comprising the steps of:

positioning at least one gasket proximately within an inner web located at an inner diameter of a thin flange, said flange having a first sealing surface and an opposed, substantially parallel, second sealing surface;

applying a compressive force to the first sealing surface and the second sealing surface; and

crushing the gaskets, causing the gaskets to expand radially into the inner web, engaging the gaskets with the inner web.

41. (New) The method of claim 40 wherein the first sealing surface and the second sealing surface each further comprise a knife edge and wherein the compressive force is applied to the knife edges.

42 (New) The method of claim 40 the step of applying a compressive force further comprises the step of bolting together two additional flanges with the thin flange located therebetween, whereby the bolting together of the flanges applies the compressive force.

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